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FINANCING OPTIONS FOR A LOCAL CONSERVATION AND SOLAR RETROFIT PROGRAM

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ABSTRACT

Financing should be a key consideration in any local effort to promote the adoption of conservation and solar technologies--economic incentives and appropriate financing mechanisms are needed to overcome the misleading appeal of conventional energy supplies to consumers. A local financing effort should also address community needs that may not be adequately met through federal or state incentives. This paper will evaluate several public financing approaches and provide a brief assessment of their attractiveness on the basis of costs/benefits, political acceptability, and administrative efficiency. The financing approaches considered have particular relevance to 1-4 unit owner occupied dwellings but may potentially be used for other sectors as well. An effective program will attempt to involve private entities, so as to leverage scarce resources and to promote broader community support. The roles of banks and Savings and Loans Associations, consumer cooperations and utilities will be considered as a means of expanding the scope of a local financing program for energy efficient technologies in the concluding portion of the paper.

1. INTRODUCTION

A local conservation and solar retrofit program aimed at encouraging large scale public adoption of these energy efficient technologies will necessarily include a financing strategy as a key element. Economic incentives and financing mechanisms are needed to overcome the misleading attraction of conventional energy supplies which are priced on an average rather than marginal cost basis. A local financing effort should also attempt to meet community needs that are not being addressed by incentives established at the federal or state level. These needs may relate to a particular technology which is appropriate to the community (passive) or to the needs of a particular segment of the population (low and moderate income households, renters).

Efforts should also be undertaken to involve existing private sector organizations in the local financing effort in view of the current political environment. Lending institutions, utilities and consumer cooperatives represent several of the community financing resources which might feasibly be accessed to expand the scope and potential effectiveness of a local program. A coordinated local strategy involving both public and private sector capital provides an effective means of matching appropriate financing sources to the unique economic needs of community residents and businesses. In the long run, this approach can work to produce a larger reduction in community energy usage for the amount of capital invested.

The following section discusses economic approaches which can and have been used by localities to encourage the adoption of energy efficient technologies. Analysis then shifts to an examination of the potential roles for private credit sources in a local retrofit program.

2. PUBLIC FINANCING APPROACHES

2.1 Property Tax Incentives

Under appropriate state enabling legislation, localities may use the property tax system to encourage the adoption of energy efficient technologies. The exemption of solar systems (mainly active) has been provided for in most states. The economic attraction of the system is marginally improved as life cycle costs are reduced slightly. The exemption does not provide a real economic incentive for the adoption of solar technologies as it does not affect the initial cost and only slightly improves the payback period. The property tax credit can be an effective incentive to spur the adoption of solar systems (active or passive) as it directly addresses the previously mentioned concerns. The credit's appeal lies in its fairly direct economic impact on property owners, potential for flexible administration and potential targeting at segments of the population that are in particular need of assistance.

The problems associated with using credits are fairly obvious. Conservation actions would generally not be considered for the credit as they are not considered in property valuation decisions at this time. The credit will tend to favor property owners over renters and higher income households (businesses) over those that are less well off. Equity considerations may arise in the community as taxpayers are in effect being asked to subsidize the actions of a few. Administrative problems may arise for assessor's offices that are unfamiliar with solar technologies in terms of evaluating the effectiveness of various systems. Finally, many local government officials will be reluctant to extend tax advantages to individuals or businesses in a time when budgets are stretched to the limit. These latter two considerations may potentially be addressed by limiting the dollar amount of credits that can be taken in one year and simplifying application and certification procedures.

The property tax credit offers localities a potentially powerful tool to promote the adoption of solar technologies. Its use must be considered in terms of current federal and state incentives, state authority over local governments and the political and financial attributes of the community itself. [Reference programs: HARFORD and ANARUNDEL COUNTIES, MARYLAND, SOUTH DAKOTA, KANSAS (no longer in effect)]

2.2 Financing the Needs of Low and Moderate Income Households

The federal government and many states provide tax credits (or deductions) to households (businesses) that install energy efficient technologies. These incentives do not address the needs of many low and moderate income households that have zero or minimal tax liabilities. The Solar and Conservation Bank was designed, in part, to meet these needs through the extension of flexible, low cost financing. The uncertain status of the bank as of this writing suggests that localities begin to consider programs which meet the needs of these households. The most effective financing mechanisms will be those which enable the borrower to repay the loan through energy savings. Local governments can address the needs of low and moderate income households through the innovative use of community development funds and local bonding capacity.

2.2a. Community Development Funds

Federal funds provided under the Community Development Block Grant (CDBG) and Urban Development Action Grant (UDAG) programs may be used to make grants or loans for energy conservation and or solar measures. CDBG monies must be oriented toward the needs of low and moderate income households while UDAG funds may be used on a somewhat wider basis. Innovative financing techniques have been developed using these funds in support of housing rehabilitation programs. These approaches have obvious relevance to an energy retrofit program in many instances.

2.2b. Financial Assistance to Low Income Households

Grants utilizing community development monies may be used to assist lower income households that cannot qualify for credit from conventional sources and who would have difficulty repaying a low cost loan extended by the local government. A deferred payment loan (DPL) should be considered as an alternative to the outright grant in all cases[1]. The DPL is secured by a lien on the property and the loan amount is recovered when the property is sold, vacated, or otherwise disposed of by the borrower. This enables the local program to regain its investment and finance energy improvements for additional households. The DPL should also be considered when the local program provides partial grants to reduce the cost of conventional financing for moderate income households. Pacific Power and Electric employs the DPL concept in its zero interest weatherization loan program. [Reference programs (grants): DOE WEATHERIZATION ASSISTANCE PROGRAM]

Direct Loan Programs have been used extensively at the local level to finance housing rehabilitation objectives. The attraction of a locally operated loan program relates to: (1) the ease of implementation; (2) program control over funds; (3) real or imagined perceptions of program staff as to unwillingness of local financial institutions to participate in a leveraging program; (4) effectiveness in addressing the needs of households that cannot qualify for conventional credit; (5) the ability to provide an ongoing financing commitment for energy efficient technologies[2]. Many loan programs tie the interest rate and terms extended on the loan to the income of the applicant. A sliding scale of differing rates and terms is often employed to sensitively address the economic needs of borrowers and to assure the most efficient use of public funds. Grants may also be used with a loan approach to reduce the amount that the household must borrow thus better meeting the needs of lower income households.

As loans are repaid, a recycling effect is created allowing more loans to be made. Interest earned on the loans also creates a multiplier effect enabling the program to gradually increase the number of loans that can be extended in the community over a number of years. The rate at which program

funds are multiplied will be intimately related to the terms under which the loans are made.

The direct loan program may be necessary to serve lower income households and in communities where financial institutions are unwilling to participate in a public financing program. A drawback of a direct loan (or grant) program are the costs that must be incurred by the local program to administer it. These costs relate to technical assistance, and loan origination and servicing functions. [Reference program: WICHITA KANSAS (loans for weatherization).

2.2c. Financial Assistance to Moderate Income Households

Partial grants to property owners (interest reduction grants) and lender subsidies may be employed by a local program to assist households that can qualify for some amount of credit from conventional sources. The cooperation of private financial institutions is required to implement these approaches. These techniques are attractive due to the following considerations: (1) simplicity of the techniques; (2) flexibility of assistance in relation to the property owner's needs; (3) immediate impact (in terms of loans made) provided through the leveraging of public funds with private capital; (4) reductions in program costs for administration[3].

Both the interest reduction grant and lender subsidy work to reduce the cost of borrowing as they lower the rate at which funds are borrowed. The interest reduction grant relies on a payment from the program to the borrower to reduce the amount that he or she has to borrow at market rates from a private lender. The lender subsidy depends on a monthly payment to the lender to cover the difference between the market rate and the effective rate charged to the borrower. This same purpose may be accomplished by paying a discount fee to the lender when the loan is originated. This sum reflects the present value of the stream of subsidy payments that the program would otherwise make over the life of the loan. Both financing techniques can be adjusted to achieve an interest rate that meets the needs of households at various income levels.

The attraction of lenders to such a program may potentially be high if it is administered in a way to reduce paperwork and the attendant costs. Lenders will be able to obtain a market rate of interest and employ their usual underwriting criteria. Participation in a local program may also present the financial institution with a means of building goodwill in the community. A potential problem with the program will be the small size of the loans. It is less profitable for lenders to make small loans due to fixed costs attributable to origination and servicing functions. Another consideration relates to the term on the loan. Lenders will generally be reluctant to provide longer repayment periods on small loans. This reduces the attraction of the loan to the consumer as the monthly payment may be higher than desired. These problems, though not insurmountable, should be recognized when implementing a leveraging program.

The attraction of lender subsidies and interest reduction grants relates to their ability to leverage scarce public funds with private capital. This enables the local program to extend a larger number of loans in the community in a shorter period of time than under a direct loan program. The advantages of leveraging must be considered in view of its limitations. Funds are leveraged only once and there is no recycling effect. These techniques are also much more effective in reducing the cost of borrowing than improving its availability. Subsidies will not assist persons living in areas where conventional credit is not available or those people who do not qualify for conventional credit. [Reference Programs: PORTLAND, OREGON (lender subsidies for weatherization), SEATTLE, WASHINGTON (UDAG pending) (interest reduction grant)]

2.3 TAX EXCEPT FINANCING

2.3a Bonds

The issuance of bonds for a retrofit program is best done when the community desires to make a substantial financial commitment to energy efficiency (in excess of several million dollars). Bonds issued for conservation or solar improvements will generally be backed by the payments that are made to the locality from borrowers. The marketability of the bond issue will be improved if the local program can obtain certification to extend loans under the FHA Title I Home Improvement Loan Program. The FHA will reimburse local governments for up to 90% of the actual loss experienced on defaulted loans. The security of the bonds and their attractiveness to investors will be further improved if the locality establishes a reserve fund based on some percentage of the uninsured portion (10%) of all the loans that the program could possibly make. This may prove to be a problem in states where local governments are prevented from lending their credit.

The Title I program is particularly well suited for the purposes of an energy retrofit program where the loan amounts will generally be small ($1,000-$5,000). Title I regulations allow loans to be made on an

unsecured basis up to $7,500. This works to simplify program administration leading to reduced costs as costly appraisals and title searches are avoided. This simplified lending approach should prove attractive to private lenders and encourage them to originate and service loans thus reducing administrative burdens on the local program. This attraction may be further enhanced by paying them an origination and servicing fee for their participation in the bond program. Lenders may also be interested in participating to build good will in the community and to encourage cross over business.

The attractiveness of the FHA guarantee should be considered in light of the restrictions that it may impose. Conservative lending standards of the FHA will generally limit bond proceeds to those households that would be able to qualify for credit from conventional lenders. The lower interest rate provided to borrowers under a government sponsored bond issue will enable a greater number of households to qualify for loans however.

Local governments should also be aware of potential restrictions which may be imposed under the Ullman Act (HR 3712). The admitted purpose of this legislation was to reduce the issuance of tax exempt mortage bonds for home purchase by state and local governments. The Ullman Act may ultimately have implications for any type of owner financing utilizing bonds which are subsidized by the federal government. [Reference programs: MINNESOTA HOUSING FINANCE AGENCY, WISCONSIN HOUSING FINANCE AGENCY (home improvment loans)]

2.3b. Credit Agreements With Local Lenders

Under this approach, the local government borrows funds from local financial institutions and intermediates the flow of capital to residents for conservation and/or solar loans. This intermediary role enables the local government to use its tax exempt status to reduce the interest rate charged on loans to borrowers.

A key consideration in obtaining the cooperation of private lenders under the credit agreement is to provide assurance that the loans which are made will be of a specified risk level. It may also be necessary for the locality to establish a cash reserve fund to provide further protection for the lender's financial position.

The credit agreement is effective in raising dollar amounts which would be hard to justify economically under a bond issue. The credit agreement is also attractive in situations where the local government is restricted financially or legally from supporting a bond issue. Finally, loans made under this approach represent an excellent example of pure leveraging where a guarantee fund is used to channel private capital into the community. [Reference programs: PORTLAND, OREGON, Public Interest Lender Program (for home improvement loans)]

3. PRIVATE SECTOR ROLES

3.1 Banks and Savings and Loan Associations

Banks and Savings and Loans Associations (S&Ls) are primary sources of credit for home improvements. These institutions should be encouraged to develop and market financing approaches which provide at least a psychological if not a real economic incentive for community residents to adopt energy efficient technologies.

A number of lenders across the nation currently offer special interest rates on home improvement loans where the proceeds are used to finance energy improvements. San Diego Savings and Loan offers a special mortgage refinancing package for approved solar systems (mainly DHW and pool heaters) which combines the original mortgage with a loan at the market rate. The new interest rate on the mortgage increases only slightly and the monthly payment remains the same or shows a small increase as the mortgage term is extended back to 30 years. The economic attraction of the solar system is enhanced as upfront costs are eliminated and the manner of financing ensures that its monthly cost will generally be exceeded by energy savings. Private financial institutions can expand the financing resources of a local retrofit program and are particularly appropriate in meeting the needs of middle and upper middle income households. Private lenders may also meet the needs of moderate income households in many instances. Lenders may use FHA Title I insurance to back loans made to borrowers and be assured that they will be reimbursed by the federal government for 90% of the loss in case of default.

Lender involvement in subsidized loans extended under the local program may be encouraged through reference to the institutions responsibilities under the Community Reinvestment Act (CRA). This legislation encourages lender participation in governmentally guaranteed, insured, or subsidized loan programs for housing or small businesses. In addition to CRA considerations, S&Ls will be given an additional incentive to participate in a local program if they qualify for low cost advances from the Federal Home Loan Bank Board under the Community Investment Fund (CIF). These advances are premised on a record of service to the community and proposals of innovative lending policies designed to meet local

credit needs, particularly those of low and moderate income households. These low cost funds may potentially be loaned to community residents for energy conservation or solar measures. The lender may choose to pass CIF savings on to borrowers or use them to handle administrative costs of the special loan program.

3.2 Consumer Cooperatives

Cooperatives present an extremely attractive means of both reducing the costs of energy efficient technologies to consumers and at the same time providing ameans of financing these measures. The cooperative essentially acts as a broker between members and producers. Potential advantages accruing to members include: volume discounts on materials, in-house quality control, in-house servicing, a fully amortized repayment schedule and nominal up front costs.[4]

The establishment of the National Consumer Cooperative Bank provides a needed funding source for both existing and new cooperatives to venture into the provision of energy conservation and/or solar measures. the uncertain fate of the bank at this time jeopardizes the financial ability of new or existing coops to enter the energy field. Existing coops with strong financial records and management capabilities will be the most likely candidates to undertake the installation and financing of energy efficient technologies. Program coordinators should assess the potential of local coops to assist program objectives, particularly in low and moderate income areas. Prospects should also be assessed for the formation of a local energy coop. Seed money might be provided from CDBG or UDAG monies.

3.3 Utilities

The Energy Security Act of 1980 eliminates prohibitions against the financing, supply and installation of energy conservation and solar systems by utilities. This ruling will probably work to increase the likelihood of utility financing the energy conservation measures and to a lesser extent solar systems.[5]

The advantages and disadvantages of utility involvement in financing conservation and solar measures have been written about extensively in other articles.[6] The commitment to finance energy efficient technologies will revolve around the particular economic circumstances of the utility and decisions made by state PUCs pertaining to financing. These developments should be carefully monitored by program staff. An active utility financing committment will greatly assist the local program in encouraging the adoption of energy conservation measures. Financing mechanisms may still be required in many communities to finance a comprehensive solar program however.

4. CONCLUSIONS

This paper has attempted to provide a brief overview of potential public financing mechanisms and incentives for a local retrofit program. It has also speculated on possible private sector roles within the context of a local financing strategy. The potential financing arrangements described in this paper, by no means, represent the full range of measures that might be feasibly used on a local basis. Instead, attention was focused on approaches that rely on existing community institutions and capacities. These local resources provide a base from which a coordinated local financing program can be built.

A coordinated approach, leveraging public sector funds with private capital is desirable in an era when federal budget commitments to localities are likely to decline. A cooperative approach involving private organizations also works to improve the potential effectiveness of the local program as they have a role in assuring its success. In the final analysis an effective local retrofit program must be formulated so as to attract the interest and support of the entire community. The support of potential private financing sources is no less important.

FOOTNOTES

1. David Gressel, Financing Techniques for Local Rehabilitation Programs, p.26.
2. IBID, p.23.
3. IBID, p.35.
4. Conference on Alternative State and Local Policies, Cooperatives and Energy, p.7.
5. Barry Satlow, "The Energy Security Act and Public Utilities: A Yellow Light for Utility Solar Financing and Marketing," Solar Energy Research Institute, p.27.
6. Edward Kahn, "Using Utilities to Finance the Solar Transition," Solar Law Reporter, September/October 1980.